LISTING OF CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in this application.

1. (Currently Amended) An intervertebral implant for implantation between adjacent vertebrae, the implant having a central axis, the implant comprising:

a bottom closing ~~cover~~ plate having ~~and a top cover plate, each with~~ an external surface extending generally transversely to the central axis for contacting at least a portion of one of the adjacent vertebrae;

a bottom cover plate in contact with the bottom closing plate, wherein at least one of the bottom closing plate and the bottom cover plate is substantially rigid;

a top closing plate having an external surface extending generally transversely to the central axis for contacting at least a portion of the other adjacent vertebrae;

a top cover plate in contact with the top closing plate, wherein at least one of the top closing plate and the top cover plate is substantially rigid;

a central part provided between the top and bottom closing ~~cover~~ plates, the central part including a fiber ~~fibre~~ system and a core, the fiber ~~fibre~~ system being at least partially joined to the cover plates, and ~~guided over the external surfaces of both cover plates so that the fibre system~~ at least partially surrounding ~~surrounds~~ the core ~~central part as well as both cover plates~~, and

a sheathing comprising an elastic sheathing body, the sheathing body at least partially surrounding the central part and being connected to the top and bottom cover plates.~~, the sheathing body being made from a homogeneous material, and~~

~~wherein the fibre system is at least partially embedded within the elastic sheathing body~~.

2. (Currently Amended) The ~~An~~ intervertebral implant according to claim 1, wherein the fiber ~~entire fibre~~ system is embedded in the elastic sheathing body.

3. (Canceled)

4. (Currently Amended) The ~~An~~ intervertebral implant according to claim 1, wherein the fiber ~~fibre~~ system has a radial thickness δ relative to the central axis and the sheathing body has a radial thickness d, wherein δ divided by d times 100% is in a range between 80% and 350%.

5. (Currently Amended) The ~~An~~ intervertebral implant according to claim 1, wherein the fiber ~~fibre~~ system can move relative to the sheathing body.

6. (Currently Amended) The ~~An~~ intervertebral implant according to claim 1, wherein the fiber ~~fibre~~ system is ~~so~~ mounted so that said fiber system ~~it~~ cannot move relative to the sheathing body.

7. (Currently Amended) The ~~An~~ intervertebral implant according to claim 1, wherein the entire fiber ~~fibre~~ system is joined with the top and bottom cover plates.

8. (Currently Amended) The ~~An~~ intervertebral implant according to claim 1, wherein the sheathing body is made from an elastomer selected from the group consisting of polyurethane, silicone rubber, polyethylene, polycarbonate urethane and polyethylene terephthalate.

9. (Currently Amended) The ~~An~~ intervertebral implant according to claim 12, wherein the cavity is filled at least partially with an incompressible medium.

10. (Currently Amended) The ~~An~~ intervertebral implant according to claim 9, wherein the incompressible medium is a liquid.

11. (Currently Amended) The ~~An~~ intervertebral implant according to claim 10, wherein the liquid is at least partially surround by an elastic formed body.

12. (Currently Amended) The ~~An~~ intervertebral implant according to claim 1, wherein the core ~~central part~~ has a cavity.

13. (Currently Amended) The ~~An~~ intervertebral implant according to claim 1, wherein the fiber ~~fibre~~ system is mechanically anchored on or in the cover plates.

14. (Currently Amended) The ~~An~~ intervertebral implant according to claim 1, wherein the fiber ~~fibre~~ system is adhered to the cover plates.

15. (Currently Amended) The ~~An~~ intervertebral implant according to claim 1, wherein the fiber ~~fibre~~ system is joined with the cover plates in a form-locking manner.

16. (Currently Amended) The ~~An~~ intervertebral implant according to claim 1, wherein the fiber ~~fibre~~ system is formed by an endless fiber ~~fibre~~.

17. (Currently Amended) The ~~An~~ intervertebral implant according to claim 1, wherein the top and bottom cover plates include ~~a plurality of lateral surfaces defining an outer circumference and~~ a plurality of grooves ~~distributed on the circumference and radially penetrating into the lateral surfaces~~ for anchoring the fiber ~~fibre~~ system.

18. (Currently Amended) The ~~An~~ intervertebral implant according to claim 1, further comprising a plurality of channels mortised in an ~~the~~ external surface~~s~~ of the cover plates to accommodate the fiber ~~fibre~~ system.

19. (Currently Amended) The ~~An~~ intervertebral implant according to claim 1, wherein the fiber ~~fibre~~ system is formed by a woven material.

20. (Currently Amended) The ~~An~~ intervertebral implant according to claim 1, wherein the core ~~central part~~ is selected from the group consisting of a hollow-cylindrical, a hollow-prismatic an ellipsoid, a partial sphere or a barrel-shaped with an axis of rotation that is coaxial with the central axis.

21. (Currently Amended) The ~~An~~ intervertebral implant according to claim 19, wherein the woven material is formed from first and second fibers ~~fibres~~ and the first fibers ~~fibres~~ include an angle α with the central axis and the second fibers ~~fibres~~ include an angle β with the central axis.

22. (Currently Amended) The ~~An~~ intervertebral implant according to claim 21, wherein the first and second fibers ~~fibres~~ are interwoven with one another.

23. (Canceled)

24. (Currently Amended) The ~~An~~ intervertebral implant according to claim 21 wherein the angle α is between 15 degrees and 60 degrees.

25. (Currently Amended) The ~~An~~ intervertebral implant according to claim 21 wherein the angle β is between 15 degrees and 60 degrees.

26. (Currently Amended) The ~~An~~ intervertebral implant according to claim 11, wherein the elastic formed body is surrounded by a semi-permeable membrane.

27. (Currently Amended) The ~~An~~ intervertebral implant according to claim 1, wherein with regard to the central axis the fiber ~~fibre~~ system is single-layered.

28. (Currently Amended) The ~~An~~ intervertebral implant according to claim 1, wherein with regard to the central axis the fiber ~~fibre~~ system is multi-layered.

29. (Currently Amended) The ~~An~~ intervertebral implant according to claim 11, wherein the fiber ~~fibre~~ system is wound on the elastic formed body.

30. (Currently Amended) The ~~An~~ intervertebral implant according to claim 29, wherein the fiber ~~fibre~~ system is wound on the elastic formed body in two different directions.

31. (Currently Amended) The ~~An~~ intervertebral implant according to claim 1, wherein the fiber ~~fibre~~ system is made from UHMWPE (ultra high molecular weight polyethylene).

32. (Currently Amended) The ~~An~~ intervertebral implant according to claim 1, wherein at least one of the closing plates includes at least one external surface feature on the external surface for anchoring the implant to one of the adjacent vertebrae ~~further comprising a closing plate fastened on each cover plate, the closing plate having an external surface with a plurality of teeth formed thereon~~.

33. (Currently Amended) The ~~An~~ intervertebral implant according to claim 1, wherein the fibers ~~fibres~~ have a diameter, the diameter being in the range of 0.005 mm and 0.025 mm.

34. (Currently Amended) An intervertebral implant for implantation between first and second vertebrae, the implant comprising:

a top substantially rigid closing plate having an external surface and an internal surface, the external surface of the top closing plate contacting ~~sized and configured to contact~~ at least a portion of the first vertebra when in an implanted position ~~and an internal surface~~;

a bottom substantially rigid closing plate having an external surface and an internal surface, the external surface of the bottom closing plate contacting ~~sized and configured to contact~~ at least a portion of the second vertebra when in the implanted position ~~and an internal surface~~;

a top cover plate in contact with the top closing plate proximate the internal surface of the top closing plate, the top cover plate having a top surface and a bottom surface;

a bottom cover plate in contact with the bottom closing plate proximate the internal surface of the bottom closing plate, the bottom cover plate having a top surface and a bottom surface;

a central part located between the internal surfaces of the top and bottom closing plates, the central part including an elastic core and a fiber system; and ~~a cavity filled at least partially with a liquid material;~~

an elastic sheathing body, the sheathing body at least partially surrounding the central part, at least a portion of the fiber system is in contact with the top cover plate and the bottom cover plate. ~~and a fibre system, wherein at least a portion of the fibre system is embedded in the elastic sheathing body and at least a portion of the fibre system is connected to the external surfaces of the top and bottom plates so that the fibre system at least partially surrounds the external surfaces of the top and bottom plates.~~

35. (Currently Amended) An intervertebral implant for implantation between first and second vertebrae, the implant comprising:

a top plate having an external surface and an internal surface;

a bottom plate having an external surface and an internal surface;

a central part including a core and a fiber system, the central part located between the internal surfaces of the top and bottom plates, the fiber system connected to the top and bottom plates and at least partially surrounding the core, the fiber system including a plurality of interwoven fibers; and

an elastic sheathing body connected to the top and bottom plates, the elastic sheathing body at least partially surrounding the fiber system. ~~, the sheathing body at least partially surrounding the central part; and~~

~~a fibre system, wherein at least a portion of the fibre system is embedded in the elastic sheathing body and at least a portion of the fibre system is connected to the external surfaces of the top and bottom~~

~~plates so that the fibre system at least partially surrounds the external surfaces of the top and bottom plates and~~

~~wherein the fibre system includes a plurality of interwoven fibres and the external surfaces of the top and bottom plates includes a plurality of grooves formed therein for receiving the fibre system.~~

36. (New) The intervertebral implant of claim 35, wherein the fiber system and the elastic sheathing body have a generally cylindrical-shape.

37. (New) The intervertebral implant of claim 35, wherein the plurality of interwoven fibers is constructed of an ultra high molecular weight polyethylene (UHMWPE) material.

38. (New) The intervertebral implant of claim 35, further comprising:

a top substantially rigid closing plate operatively coupled to the top plate so that an external surface of the top closing plate contacts at least a portion of the first vertebra when in an implanted position; and

a bottom substantially rigid closing plate operatively coupled to the bottom plate so that an external surface of the bottom closing plate contacts at least a portion of the second vertebra when in the implanted position.

39. (New) The intervertebral implant of claim 35, wherein the external surface of the top and bottom plates contact at least a portion of the first and second vertebrae, respectively, when in an implanted position.

40. (New) The intervertebral implant of claim 1, wherein the top and bottom closing plates are made from titanium or a titanium alloy.

41. (New) The intervertebral implant of claim 1, wherein the bottom cover plate and the top cover plate are joined to the bottom closing plate and the top closing plate, respectively.

42. (New) The intervertebral implant of claim 1, wherein the bottom and top closing plates are substantially rigid.

43. (New) The intervertebral implant of claim 34, wherein the fiber system is mechanically anchored to the top and bottom cover plates.

44. (New) The intervertebral implant of claim 34, wherein the fiber system is adhered to the top and bottom cover plates.

45. (New) The intervertebral implant of claim 34, wherein the top and bottom cover plates include a plurality of openings for receiving at least a portion of the fiber system.

46. (New) The intervertebral implant of claim 34, wherein the elastic sheathing body contacts at least a portion of the top surface of the top cover plate and at least a portion of the bottom surface of the bottom cover plate.

47. (New) An intervertebral implant for implantation between an upper and lower vertebrae, the implant having a central axis, the implant comprising:

a first substantially rigid bone contacting plate having an external surface extending generally transversely to the central axis for contacting at least a portion of the upper vertebra;

a second substantially rigid bone contacting plate having an external surface extending generally transversely to the central axis for contacting at least a portion of the lower vertebra;

a third plate operatively coupled to the first bone contacting plate, the third plate including a plurality of openings;

a fourth plate operatively coupled to the second bone contacting plate, the fourth plate including a plurality of openings;

a central part substantially located between the third and fourth plates, the central part including a flexible core and a fiber system, wherein the core is substantially cylindrical and includes a top surface and a bottom surface, the top surface of the core being in contact with the third plate and the bottom surface of the core being in contact with the fourth plate, and wherein the fiber system at least partially surrounds the core, and is at least partially received within the plurality of openings formed in the third and fourth plates so that the fiber system is joined to the third and fourth plates; and

an elastic sheathing body at least partially surrounding the fiber system and the core, and connected to the third and fourth plates.

48. (New) The intervertebral implant of claim 47, wherein the first and second bone contacting plates are made from titanium or a titanium alloy.

49. (New) The intervertebral implant of claim 48, wherein the fiber system is constructed of an ultra high molecular weight polyethylene (UHMWPE) material.

50. (New) The intervertebral implant of claim 47, wherein the elastic sheathing body contacts at least a portion of a top surface of the third plate and at least a portion of a bottom surface of the fourth plate.